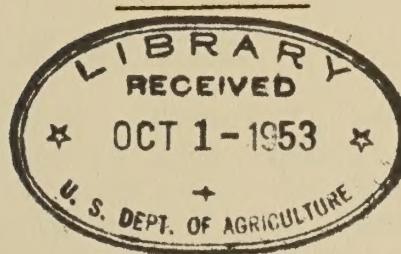


OREGON 22 CLACKAMAS

FIELD APPRAISAL ANALYSIS

Prepared by
Field Appraisal Section
Program Analysis Division
RURAL ELECTRIFICATION ADMINISTRATION



Field Appraisal
Completed in
June 1953

*

August 19, 1953

Field Appraisal Section
Program Analysis DivisionSUMMARY AND CONCLUSION
OREGON 22 CLACKAMASAREA CHARACTERISTICS

During the period 1930-1950, the total population of Clackamas County increased by 88 percent. The rural population during this period increased by 20 percent, with slightly more than one-half of the increase taking place in the farm segment.

Farming is diversified and appears to be stable in Clackamas County. Fifty-six percent of the farm income in 1949 in Clackamas County was from the sale of livestock and livestock products, and practically all of the remainder from the sale of crops. The lumber industry provides a source of farm income as well as off-farm work for area residents. The average value of land and buildings per farm was \$12,448 in 1950, which was 57 percent higher than 5 years earlier. Gross income from the sale of farm products averaged \$2,700 in 1949. Three-fifths of the farmers worked off the farm in 1949, while slightly more than two-fifths worked 100 or more days off the farm. Thirty-five percent of the farmers reported other income of the family exceeding the value of farm products sold in 1949. The terrain is characterized by rolling hills and mountains interspersed with valleys. The soils range from clay in the northern part of the area to a volcanic residue in the southern part.

ULTIMATE NUMBER OF CONSUMERS

The most recent power requirement study (February 1953) on this system indicates that 1,017 consumers will be served by the cooperative in 1963.

ESTIMATED FUTURE CONSUMPTION OF ELECTRICITY

This system was energized in 1941. Since 1942, average monthly farm consumption increased from 37 kwh to 210 kwh in 1952. This is an increase of 17 kwh in average monthly consumption for each year. For the year ending May 31, 1953, average monthly farm consumption was 221 kwh. Farm consumers indicated that they expected to increase their use of electricity 47 percent by 1956. Nonfarm consumers indicated an increase of 30 percent during the same period.

Active competition with LP gas, the supply of wood for use as fuel, high retail power rates, and the likelihood that the scale of operations in the area's lumber industry may be somewhat reduced in the near future are serious deterrents to future use of electricity in this area. The survey indicated that 10 percent of the future indicated load will be in active competition with LP gas. It is anticipated by some persons engaged in logging operations that at the end of 3 years, at the present rate of cutting, their operations will be reduced by more than one-half.

2-Summary - Oregon 22 Clackamas - August 19, 1953

Based on all factors believed to be significant, this analysis leads to the following estimates, which are certified as being reasonable and may be expected to be attained in the years indicated:

<u>Class of Consumer</u>	<u>12 Months Ended</u>			
	<u>May 31, 1953</u>	<u>1955</u>	<u>1958</u>	<u>1963</u>
Farm	221	280	340	410
Nonfarm Residential	(79*	220	270	320
Seasonal (annual)	(420	480	600
Small Commercial	1,113	1,165	1,200	1,250
Public Buildings	100	120	135	160
Irrigation (annual) (10 HP)	—	6,000	7,000	8,000
Large Commercial (annual)	7,308	(65kw)	(65kw)	
Rowland Sawmill		45,000	25,000	--
Mt. Hood Skiway Terminal		(45kw)	(50kw)	(60kw)
Mt. Hood Timberline Lodge		120,000	130,000	140,000
Wecks Boys' Camp		(140kw)	(185kw)	(260kw)
Ski Bowl (potential)		500,000	650,000	900,000
		(15kw)	(18kw)	(20kw)
		25,000	30,000	35,000
		(25kw)	(25kw)	(25kw)
		85,000	85,000	85,000

*Nonfarm residential and seasonal consumers are grouped together on operating report.

Robert B. Williamson
Assistant Head
Field Appraisal Section
Program Analysis Division

August 19, 1953

ANALYSIS OF BASIC FACTORS RELATED TO THE
RURAL ELECTRIFICATION LOAN FOR
OREGON 22 CLACKAMAS

This analysis of the probable future consumption of electricity for the Sandy Electric Cooperative, with headquarters at Sandy, Oregon, (Figure 1) is based on a field study conducted by Earl A. Gardner, Agricultural Economist, Field Appraisal Section, Program Analysis Division, and was completed in June 1953. This analysis was prepared by William B. Kingree, Agricultural Economist, Field Appraisal Section, Program Analysis Division. The field work consisted primarily of visits to 126 served and prospective consumer units. Of these, 95 were served farm consumers, 24 were served nonfarm consumers, 5 were served irrigation consumers, 1 was a potential farm consumer, and 1 was a potential nonfarm consumer.^{1/} In addition, local businessmen and agricultural leaders were consulted as to local economic trends and their estimate of the future for the area with respect to use of electric power.

ULTIMATE NUMBER OF CONSUMERS

The most recent power requirement study (February 1953) on this system indicates that 1,017 consumers will be served by the cooperative in 1963.

NATURE OF PRESENT AND INDICATED FUTURE CONSUMPTION
OF ELECTRICITY AS REVEALED BY THE SURVEY

A tabulation of the raw data obtained from the respondents revealed the following average monthly consumption figures:

TABLE I
INDICATED MONTHLY KWH CONSUMPTION^{a/}

Consumer Class	Present	Future ^{b/}	Percent Increase
Farm	249	366	47
Nonfarm	219	284	30

a/ Based on indications by respondents in the survey and average energy requirements as determined by REA on a countrywide basis. Farm consumers were using electricity at the average rate established by REA on a countrywide basis, while nonfarm consumers were using 120 percent of the average.

b/ Based on what respondents expect to add in 3 years.

1/ Respondents in the survey were randomly selected and comprise a tabular list sample of approximately 16.5 percent of the farm and nonfarm consumer units.

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Potential consumers indicated that they planned to obtain a sufficient number of appliances and pieces of equipment to attain the following monthly averages: farm 460 kwh and nonfarm 746 kwh.

Historical consumption records for farm and nonfarm consumers in the survey indicate a rising average consumption. Consumers added in recent years have attained much higher initial averages than those connected during the first years of the system's existence. This is shown in Table II.

TABLE II

AVERAGE MONTHLY KWH CONSUMPTION OF
108 FARM AND NONFARM CONSUMERS

Total Number Years With Electricity	Number of Schedules	Average Kwh Consumption Per Month										
		1942	'43	'44	'45	'46	'47	'48	'49	'50	'51	'52
11	13	45	59	45	57	62	67	94	91	135	145	155
10	0	—	—	—	—	—	—	—	—	—	—	—
9	4	—	—	26	39	39	67	64	66	61	138	200
8	1	—	—	—	29	58	45	31	31	39	88	111
7	12	—	—	—	—	51	71	72	107	162	170	193
6	10	—	—	—	—	—	129	141	134	210	221	317
5	14	—	—	—	—	—	—	155	128	151	226	256
4	5	—	—	—	—	—	—	—	249	116	198	338
3	18	—	—	—	—	—	—	—	—	125	196	234
2	17	—	—	—	—	—	—	—	—	—	191	209
1	14	—	—	—	—	—	—	—	—	—	—	286
Weighted Average		45	59	41	51	54	83	110	121	143	188	236

A saturation of electrical appliances and equipment measured in terms of the percent of consumers presently having them and a corresponding percent anticipated in the future was compiled from field schedules of presently connected consumers. The difference in saturation, as shown by the increase in percentage points, was converted to future kwh requirements per 100 consumers for each appliance and piece of equipment. This tabulation is presented in Table III.

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TABLE III

PRESENT AND INDICATED SATURATION OF ELECTRICAL APPLIANCES
AND EQUIPMENT AND CORRESPONDING INDICATED INCREASE IN
KWH USAGE OF FARM AND NONFARM CONSUMERS, COMBINED^a
OREGON 22 CLACKAMAS

Appliance or Equipment	Percent of Consumers		Percentage Points	Increase KWH Usage (Per 100 Consumers)	h/
	Presently Using	Indicating Future Use			
Air Compressor	2	2	—	—	—
Animal Clipper	1	2	1	3	
Blanket	6	7	1	120	
Broiler	2	2	—	—	
Brooder (Infrared)	2	2	—	—	
Brooder (Hover)	10	14	4	869	
Brooder (Lamb)	1	1	—	—	
Churn	4	4	—	—	
Clock	56	56	—	—	
Clothes Drier	4	10	6	4,130	
Cream Separator	3	6	3	88	
Dishwasher	1	1	—	—	
Drill Press	23	24	1	11	
Egg Cleaner (Dry Type)	—	1	1	12	
Egg Cooler	1	1	—	—	
Elevator (Rough)	1	1	—	—	
Fan (Cent. Hot Air Cir.)	3	6	3	600	
Fan (Exhaust)	3	4	1	13	
Fan (Household)	11	12	1	13	
Fence	20	23	3	125	
Food Mixer	42	46	4	102	
Freezer (Home)	15	29	14	12,870	
Garden Watering	8	10	2	188	
Heating Pad	24	24	—	—	
Hot Plate	35	37	2	119	
Hot Water Cir. Pump	1	2	1	108	
Iron	92	92	—	—	
Ironer	6	6	—	—	
Lamp (Germicide)	1	1	—	—	
Lathe	3	3	—	—	
Lighting:					
Beef Cattle Barn	—	1	1	10	
Bunk House	7	8	1	13	

2-Table III - Oregon 22 Clackamas - August 19, 1953

Appliance or Equipment	Percent of Consumers		Increase		b/
	Presently Using	Indicating Future Use	Percentage Points	KWH Usage (Per 100 Consumers)	
Lighting (cont'd)					
Cave or Spring House	5	5	—	—	
Dairy Barn	4	5	1	32	
Garage	20	24	4	33	
General Barn	35	39	4	101	
Grain & Feed Storage Bldg.	3	4	1	2	
Hog Barn	1	1	—	—	
House Lighting	99	99	—	—	
Milk House	5	6	1	31	
Other Buildings	20	20	—	—	
Poultry Brooder House	6	6	—	—	
Poultry Laying House	23	26	3	116	
Shop	13	15	2	30	
Yard	25	34	9	166	
Livestock Watering	24	24	—	—	
Milk Cooler	1	3	2	3,159	
Milking Machine	2	4	—	816	
Oil Furnace	3	3	—	—	
Percolator	27	29	2	96	
Power Saw	25	28	3	41	
Pressure System (Less than 22')	22	25	3	594	
Pressure System (Greater than 22')	53	60	7	1,608	
Radio	97	97	—	—	
Range	34	52	18	22,200	
Refrigerator	80	84	4	1,476	
Roaster	5	6	1	432	
Sewing Machine	27	29	2	17	
Soldering Iron	11	11	—	—	
Space Heater (Portable)	12	14	2	119	
Television Receiver	17	43	26	9,396	
Toaster	69	69	—	—	
Tool Grinder	14	15	1	20	
Vacuum Cleaner	61	64	3	68	
Ventilator (Attic)	1	1	—	—	
Waffle Iron	51	52	1	20	
Washing Machine	90	92	2	88	
Water Heater with Bath	30	52	22	65,400	
Water Heater without Bath	1	1	—	—	
Water Heater (Pressure Type)	1	1	—	—	
Water Warmer	1	1	—	—	

3-Table III - Oregon 22 Clackamas - August 19, 1953

Appliance or Equipment	Percent of Consumers		Increase		b/ KWH Usage (Per 100 Consumers)
	Presently Using	Indicating Future Use	Percentage Points	1	
Water Pail	—	1	1	1	240
Welder	3	4	1	1	67
1/4 HP Motor	1	1	—	—	—
1/2 HP Motor	1	1	—	—	—

a/ Based on indications of presently connected consumers. Data do not reflect instances where more than one of the same appliance exists per consumer. These cases are rare and do not affect the over-all pattern materially.

b/ Based on average energy requirements determined by REA.

ECONOMIC CHARACTERISTICS

During the period 1930-1950, the total population of Clackamas County increased by 88 percent. The rural population during this period increased by 20 percent, with slightly more than one-half of the increase taking place in the farm segment. In 1950, the farm population constituted 26 percent of the total population.

Farming is diversified and appears to be stable in Clackamas County. In 1949, the sale of all livestock and livestock products accounted for 56 percent of the gross farm income in the county. Poultry and poultry products, the largest source of income, accounted for nearly one-fourth of the farm income in 1949. Farms reporting livestock in April 1950 kept an average of 292 turkeys, 94 chickens, 45 sheep, 10 hogs, and 7 cows. About two-thirds of the farms in the county reported keeping cattle and chickens. The sale of crops in 1949 accounted for about 41 percent of the gross farm income. Average yields per acre for the major crops were: oats 35 bushels; barley 31 bushels; hay 1½ tons; vetch seed 232 pounds; fescue seed 169 pounds; strawberries, 2,823 pounds; raspberries 1,894 pounds; and boysenberries 2,672 pounds. The sale of vegetables and nursery and greenhouse products in 1949 accounted for 5 percent and 7 percent, respectively, of the farm income. Three percent of the farm income was attributed to the sale of forest products. The average cash income per farm from the sale of farm products in 1949 was \$2,700. Of the farms reporting sale of farm products in 1949, 30 percent had cash farm incomes of \$2,500 or more. From 1945-1950, there was a 6 percent increase in farm acreage, a 4 percent increase in the number of farms, and a 57 percent increase in value of lands and buildings.

Ninety-four percent of the farm operators in Clackamas County in 1950 owned their farms in full or in part, while 95 percent resided on the farm. Sixty-two percent of the operators reported working off the farm in 1949, and 46 percent reported working 100 or more days off the farm. Fifty-five percent reported other income of the family exceeding the value of farm products sold.

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In 1950, 43 percent of the farms had one or more trucks, 78 percent had one or more tractors, and 80 percent had one or more automobiles. Ninety percent of the farms in Clackamas County are located alongside a hard-surfaced or gravel road. An average distance of 6 miles to a trading center was reported, with 50 percent of the farms being less than 5 miles from such center.

According to banks visited in the service area, the ratio of deposits to loans is 2.3 to 1.0. One bank official estimated that about 30 percent of his bank's loans were made to farmers. The supervisor of the local Farmers' Home Administration Office reported a total of 185 loans outstanding in Clackamas County, with only one of these loans in the service area.

According to the appraiser, the timber in Clackamas County is not being cut on a selective basis. As a result, it is anticipated by some persons engaged in logging operations that at the end of 3 years, at the present rate of cutting, their operations will be reduced by more than one-half. If this estimate is correct, it may be anticipated that family incomes and off-farm employment will decrease and that population shifts may take place.

PHYSICAL CHARACTERISTICS

The service area is located in the northeastern part of Clackamas County; it also extends a short distance into the eastern part of Multnomah County. The topography of the area is characterized by rolling hills and mountains interspersed with valleys. Most of the farming in the area is done in the valleys; berry patches, however, grow well on the higher slopes of the hills. The elevation varies between 900 and 6,000 feet in the service area. The soils range from clay in the northern part of the area to a volcanic residue in the southern part. Average annual precipitation at two stations near the service area is 66 inches with 35 percent falling during the months of April through October. The growing season averages 194 days.

ANALYSIS OF FUTURE CONSUMPTION

This system was energized in 1941. Since 1942, average monthly farm consumption increased from 37 kwh to 210 kwh in 1952. This is an increase of 17 kwh in average monthly usage for each year. For the year ending May 31, 1953, average monthly farm consumption was 221 kwh. Table II shows that new consumers are generally being added at levels of consumption of approximately 5 times that of the initial consumption of the earlier consumers.

If farm consumption is to increase at the rate indicated in Table I, we might expect an average monthly farm figure of 325 kwh (221×1.47). To achieve the increases in both farm and nonfarm consumption indicated by the rates of increase shown in Table I, the specific additional kwh resulting from indicated future saturation of appliances and equipment as shown in Table IV must be attained.

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Slightly more than nine-tenths of the indicated increase would need to occur in the household. Moreover, nearly eight-tenths of the indicated increase would need to occur as a result of the addition of water heaters, ranges, and home freezers.

There are other factors which must be considered in arriving at estimates of future electric consumption. Among these are (1) the extent to which LP gas use is likely to reduce the indicated future increases in electrical usage, (2) the supply of wood for use as fuel, and (3) the extent to which other related economic trends are likely to have their impact upon the indicated future consumption.

TABLE IV
INDICATED AND ESTIMATED KWH USAGE, FARM AND
NONFARM CONSUMERS BY CHARACTER OF LOAD^{a/}

Use	Indicated Future Saturation	Indicated KWH Increase	Percent of Indicated KWH Increase	Estimated KWH Increase	Estimated Present KWH Increase	Estimated Future KWH Use	Estimated Total
<u>Major Household Uses</u>							
Water Heater	52	68,016	52.0	27,206	94,536	121,742	
Range	52	23,088	17.6	11,544	41,933	53,477	
Home Freezer	29	13,385	10.2	9,370	14,134	23,504	
Television Receiver	43	9,772	7.5	6,840	6,290	13,130	
Clothes Drier	10	4,295	3.3	1,718	3,058	4,776	
Pressure System— greater than 22'	60	1,672	1.3	1,588	13,428	15,016	
Refrigerator	84	1,535	1.2	1,458	30,851	32,309	
Major Productive Uses		6,199	4.7	5,579	11,972	17,551	
All Other Uses		2,830	2.2	2,547	88,520	91,067	
Total		130,792	100.0				

Estimated annual average increase in kwh consumption per 100 consumers (total) - 1956	67,850	372,572
Estimated annual average increase in kwh consumption per consumer (total) - 1956	679	3,726
Estimated monthly average increase over a 3-year period (total) - 1956	57	311

a/ Adjusted. Appliance usage and amount of electricity is 104 percent of the average for the United States as determined by REA.

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TABLE V

STATUS OF LP GAS USE, 120 RESPONDENTS
REPORTING IN RANDOM SAMPLE SURVEY^{a/}

Consumers' Position With Respect to Use of Gas	Number in Survey	Percent of Total
Not using and not planning to use	105	87.5
Not using but planning to use	3	2.5
Presently using gas	12	10.0
	120	100.0
Used for:		
Cooking	11	
Water Heating	5	
Refrigeration	3	
House Heating	2	
Planning to change to electricity in the future	3	2.5

^{a/} All served farm, nonfarm, and potential respondents indicating use of gas.

Table V indicates that 10 percent of the respondents are presently using LP gas for one or more purposes, and that 2.5 percent not now using gas, are planning to do so in the future. However, 2.5 percent have indicated their intentions to change to electricity sometime in the future. One-tenth of the total future indicated load will be in active competition with LP gas.

The retail rate schedule in effect at the time of the appraisal is as follows:

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SCHEDULE A. Farm and Home Service

First 50 kwh per month @ 7.0¢ per kwh
Next 50 kwh per month @ 4.0¢ per kwh
Next 100 kwh per month @ 2.5¢ per kwh
All Over 200 kwh per month @ 1.0¢ per kwh
Minimum monthly charge - \$2.50

CONTROLLED WATER HEATER RATE FOR USE
UNDER SCHEDULES A, B, AND E

With an Electric Range in Use

First 200 kwh per month @ the regular rate in effect
Next 300 kwh per month @ 1¢ per kwh
All Over 500 kwh per month @ the regular rate resumed

Without an Electric Range

First 100 kwh per month @ the regular rate in effect
Next 300 kwh per month @ 1¢ per kwh
All Over 400 kwh per month @ the regular rate resumed

SCHEDULE B. Commercial and Small Power Service

First 50 kwh per month @ 8.0¢ per kwh
Next 50 kwh per month @ 4.5¢ per kwh
Next 2900 kwh per month @ 2.5¢ per kwh
All Over 3000 kwh per month @ 2.0¢ per kwh
Minimum monthly charge - \$2.50

SCHEDULE E. Service to Schools, Churches & Community Halls

First 50 kwh per month @ 8.0¢ per kwh
Next 50 kwh per month @ 4.5¢ per kwh
Next 900 kwh per month @ 2.5¢ per kwh
All Over 1000 kwh per month @ 1.5¢ per kwh
Minimum annual charge - \$18.00

SCHEDULE AS. Seasonal Residential Service

First 300 kwh per season @ 8.0¢ per kwh
Next 300 kwh per season @ 4.5¢ per kwh
Next 600 kwh per season @ 2.5¢ per kwh
All Over 1200 kwh per season @ 1.5¢ per kwh
Minimum annual charge \$30.00

SCHEDULE I IRRIGATION SERVICE

A fixed annual charge of 10 percent of the investment required to serve the load, plus a demand charge of \$1.25 per kw per month, plus an energy charge of the first 200 kwh per kw demand per month @ 3.5 mills per kwh and over 200 kwh per kw of demand per month @ 2 mills per kwh. The minimum annual charge is the fixed charge.

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TABLE VI

TRENDS RELATED TO THE RATE OF INCREASE
IN USE OF ELECTRIC POWER

Item and Relationship	Trend										
<u>Population</u>	<u>1920</u>	<u>1930</u>	<u>1940</u>								
Clackamas County	37,698	46,205	57,130								
State of Oregon	783,389	953,786	1,089,684								
Ratio Area to State	.048	.048	.052								
				<u>1950</u>							
				86,716							
				1,521,341							
				.057							
<u>Number of Farms</u>	<u>1930</u>	<u>1935</u>	<u>1940</u>	<u>1945</u>	<u>1950</u>						
Clackamas County	4,747	6,200	5,475	5,832	6,090						
State of Oregon	55,153	64,826	61,829	63,125	59,827						
Ratio Area to State	.086	.096	.089	.092	.101						
<u>Average Income From All Farm Products Sold</u>		<u>1939</u>	<u>1944</u>	<u>1949</u>							
Clackamas County		\$ 832	\$ 2,050	\$ 2,700							
State of Oregon		\$ 1,562	\$ 3,792	\$ 4,982							
Ratio Area to State		.533	.540	.541							
<u>Average Value of Land and Buildings</u>		<u>1940</u>	<u>1945</u>	<u>1950</u>							
Clackamas County		\$ 5,430	\$ 7,933	\$ 12,448							
State of Oregon		\$ 7,712	\$ 11,054	\$ 19,963							
Ratio Area to State		.704	.718	.624							
<u>Cost of Purchased Power</u>	<u>1942</u>	<u>1944</u>	<u>1946</u>	<u>1948</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>				
Oregon 22 Clackamas	0.94¢	0.73¢	0.69¢	0.42¢	0.35¢	0.34¢	0.33¢				
All Co-ops in Oregon	0.91¢	0.65¢	0.58¢	0.46¢	0.39¢	0.38¢	0.38¢				
Ratio Ore.22 to All	1.033	1.123	1.190	0.913	0.897	0.895	0.868				
<u>Average Monthly Kwh Consumption Per</u>											
<u>Farm Consumer</u>	<u>1942</u>	<u>1943</u>	<u>1944</u>	<u>1945</u>	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>	<u>1952</u>
Oregon 22 Clackamas	37	60	77	85	95	116	126	133	160	181	210
4 Neighboring Co-ops	83	118	133	147	180	242	279	332	401	436	534
Ratio Ore.22 to Neighbors	.446	.508	.579	.578	.528	.479	.452	.401	.399	.415	.393

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Trends in the area relative to the State (Table VI) indicate that Clackamas County is increasing in importance, both absolutely and relatively. During the period 1930-1950, the population more than doubled, while the number of farms fluctuated upward by 28 percent. Average income from the sale of farm products during the period 1939-1949 increased substantially in absolute terms, but showed only a slight increase relative to the State as a whole. The relationship of the county to the State in average value of land and buildings was less favorable in 1950, as compared with earlier periods. Power costs have fallen steadily, both absolutely and relatively, while at the same time average consumption has increased steadily.

Considering the present and probable continued use of LP gas in the service area, the supply of wood for use as fuel, the likelihood that the scale of operations in the area's lumber industry may be somewhat reduced in the near future, and the high retail power rates, the attainment of the indicated consumption within a 3-year period appears to be unlikely at this time. On the basis of these factors, it is estimated that within 3 years 40 percent of the indicated increase for water heaters and clothes driers will be realized. Fifty percent of the indicated increase attributed to ranges, 70 percent to home freezers and television receivers and 95 percent to pressure systems and refrigerators will be realized. It is also estimated that 90 percent of the increase attributed to productive and other uses will be realized. Kilowatt-hour increases at these rates are shown in Table IV.

Based on factors believed to be significant, this analysis leads to the following estimates, which are certified as being reasonable and may be expected to be attained in the years specified:

<u>Class of Consumer</u>	12 Months Ended			
	<u>May 31, 1953</u>	<u>1955</u>	<u>1958</u>	<u>1963</u>
Farm	221	280	340	410
Nonfarm Residential	(79*	220	270	320
Seasonal (annual)	(420	480	600
Small Commercial	1,113	1,165	1,200	1,250
Public Buildings	100	120	135	160
Irrigation (annual) (10 HP)	—	6,000	7,000	8,000
Large Commercial (annual)	7,308	(65kw)	(65kw)	
Rowland Sawmill		45,000	25,000	—
Mt. Hood Skiway Terminal		(45kw)	(50kw)	(60kw)
Mt. Hood Timberline Lodge		120,000	130,000	140,000
Wecks Boys' Camp		(140kw)	(185kw)	(260kw)
Ski Bowl (potential)		25,000	30,000	35,000
		(25kw)	(25kw)	(25kw)
		85,000	85,000	85,000

*Nonfarm residential and seasonal consumers are grouped together on operating report.

